

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for ~~forming~~ forming a photoresist pattern for use in ~~manufacture of semiconductor device, including a step of the manufacture of a~~ semiconductor device, comprising:

forming a porous underlayer coating occupied by pores of 5 to 80% at a rate of volume on a semiconductor substrate; a step of

forming a photoresist layer on the porous underlayer coating; a step of
exposing the semiconductor substrate covered with the porous underlayer coating and the photoresist to light; a step of

developing the photoresist after the exposure to light; and a step of
removing the porous underlayer coating corresponding to a part of developed and removed photoresist by etching,

wherein:

the porous underlayer coating is formed by applying on a semiconductor substrate an underlayer coating forming composition comprising a blowing agent in an amount of 2 to 30 mass% of a solid content of the composition, and heating the composition.

2. (Currently Amended) The method ~~for forming photoresist pattern~~ according to claim 1, ~~further including a step of comprising~~ forming an anti-reflective coating or a flattening coating before or after the step of forming a porous underlayer coating is formed on a semiconductor substrate.

3. (Currently Amended) The method ~~for forming photoresist pattern~~ according to claim 1, wherein the ~~porous underlayer coating is formed by applying an underlayer coating forming composition containing a blowing agent or a polymer having a blowing group on a~~

~~semiconductor substrate, and heating it.~~ blowing agent is selected from the group consisting of 4,4-oxybisbenzene sulfonyl hydrazide and azodicarbonamide.

4. (Currently Amended) An underlayer coating forming composition for forming a porous underlayer coating occupied by pores of 5 to 80% at a rate of volume for use in ~~manufacture of the manufacture of a semiconductor device,~~ comprising a blowing agent, an organic material and ~~a solvent~~ solvent, wherein a proportion of the blowing agent in solid content of the composition is 2 to 30 mass%.

5. (Currently Amended) ~~An underlayer~~ The underlayer coating forming composition ~~for forming a porous underlayer coating for use in manufacture of semiconductor device, comprising a polymer having a blowing group and a solvent, according to claim 4,~~ wherein the blowing agent is selected from the group consisting of 4,4-oxybisbenzene sulfonyl hydrazide and azodicarbonamide.

6. (Canceled)

7. (Original) The underlayer coating forming composition according to claim 4, wherein the blowing agent is a blowing agent that is decomposed with heat to generate nitrogen, carbon dioxide or water vapor.

8. (Canceled)

9. (Previously Presented) The underlayer coating forming composition according to claim 4, wherein the organic material is an organic material containing at least one component selected from the group consisting of a polymer, a crosslinking compound and a light absorbing compound.

10. (Original) The underlayer coating forming composition according to claim 9, wherein the polymer is a polymer having at least one aromatic ring structure selected from the group consisting of a benzene ring, a naphthalene ring, an anthracene ring and a triazine ring.

11. (Original) The underlayer coating forming composition according to claim 9, wherein the crosslinking compound is a compound having at least two crosslink forming substituents.

12. (Original) The underlayer coating forming composition according to claim 9, wherein the light absorbing compound is a compound having at least one ring structure selected from the group consisting of a benzene ring, a naphthalene ring, an anthracene ring and a triazine trione ring.

13. (Currently Amended) A method for ~~forming~~ forming a photoresist pattern for use in ~~manufacture of semiconductor device, including a step of the manufacture of a~~ semiconductor device, comprising:

forming a porous underlayer coating occupied by pores of 5 to 80% at a rate of volume by applying the underlayer coating forming composition according to claim 4 on a semiconductor substrate and heating it; ~~a step of~~

forming a photoresist layer on the porous underlayer coating; ~~a step of~~

exposing the semiconductor substrate covered with the porous underlayer coating and the photoresist to light; ~~a step of~~

developing the photoresist after the exposure to light; and ~~a step of~~

removing the porous underlayer coating corresponding to a part of developed and removed photoresist by etching.